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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,785	07/25/2005	Linda Lefevre	Serie 6048	4802
Linda K Russell Air Liquide Intellectual Property Department Suite 1800 2700 Post Oak Boulevard Houston, TX 77056			EXAMINER YANG, JIE	
			ART UNIT 1793	PAPER NUMBER
			MAIL DATE 02/17/2010	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/511,785

**Applicant(s)**

LEFEVRE ET AL.

**Examiner**

JIE YANG

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17, 20-22, 24-28 and 30-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17, 20-22, 24-28 and 30-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Claim 31 is amended, and claims 17, 20-22, 24-28, and 30-32 are pending in application. Wherein claims 30 and 31 are independent claims.

### ***Clarification***

Because the Examiner applied the Stratton et al (US 7,147,732 B2, thereafter US'732) in the office action marked 7/14/2009 and all the citations come from this newly cited reference, although it corresponding to WO 02/44430, it is still regarded as a newly cited reference. The detail rejection can refer to the office action marked 7/14/2009.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 21, 22, 24, 25, and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stratton et al (US 7,147,732 B2, thereafter US'732).

US'732 is applied to claims 17, 21, 22, 24, 25, and 30-32 for the same reason as stated in the previous office action marked 7/14/2009.

Regarding the newly amended feature of selecting absorbing gases from the group consisting of saturated hydrocarbons, unsaturated hydrocarbons, CO<sub>2</sub>, CO, H<sub>2</sub>O, NH<sub>3</sub>, NO, N<sub>2</sub>O, NO<sub>2</sub>, and mixture thereof in the instant claim 31, which is a proper form of "Markush group" for selecting different species. US'732 teaches that the mixture of gas includes carbon monoxide or carbon dioxide (Col.2, lines 16-27 of US'732), which reads on the amended limitation.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over US'732 in view of Nakamura (JP 63149313, thereafter JP'313).

US'732 in view of JP'313 is applied to claim 20 for the same reason as stated in the previous office action marked 7/14/2009.

Claims 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over US'732 in view of Wandke (EP 0869189 machine translation, thereafter EP'189).

US'732 in view of EP'189 is applied to claims 26 and 27 for the same reason as stated in the previous office action marked 7/14/2009.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over US'732 in view of Andersson (US 5,938,866, thereafter US'866).

US'732 in view of US'866 is applied to claim 28 for the same reason as stated in the previous office action marked 7/14/2009.

### ***Response to Arguments***

Applicant's arguments, see "applicant arguments/remarks", filed 10/15/2009, with respect to the rejection(s) of claim(s) under 35 U.S.C. 103(a) have been fully considered but they are not persuasive. Regarding the arguments related to the amended feature in the instant claims, the Examiner's position is stated as above.

In the remark, the Applicant argues: US'732 teaches against the present invention because US'732 teaches that the quenching composition used in the method of US'732 requires nitrogen.

In response,

The Examiner notes that the Applicant applies "comprising" language for the cooling gas mixture in the instant claims 30 and 31, which does not exclude additional gases in the gas mixture. There is no limitation in the instant claims excluding nitrogen gas in the instant application. As pointed out in the previous office action marked 7/14/2009, US'732 teaches adjusting the similar gases (including hydrogen, carbon monoxide or carbon dioxide) within the similar ranges (Col.2, lines 16-27 of US'732) for the same rapid cooling metallic object application (Col.1, lines 7-24 of US'732) as

recited in the instant invention. The overlapping range of gases is rendered a prima facie case of obviousness. SEE MPEP 2144.05 I.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jie Yang whose telephone number is 571-2701884. The examiner can normally be reached on IFP.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-2721244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JY

/Roy King/  
Supervisory Patent Examiner, Art Unit 1793